

TECHNICAL MANUAL

**MAINTENANCE PROCESSING OF REPARABLE
PROPERTY AND THE REPAIR CYCLE ASSET CONTROL
SYSTEM**

(ATOS)

THIS PUBLICATION SUPERSEDES TO 00-20-3, CHANGE 9, DATED 1 APRIL 2001. THIS PUBLICATION HAS BEEN EXTENSIVELY REWRITTEN; THEREFORE REVISION BARS HAVE BEEN OMITTED.

DISTRIBUTION STATEMENT: Approved for public release; distribution is unlimited.

INSERT LATEST CHANGED PAGES. DESTROY SUPERSEDED PAGES.

LIST OF EFFECTIVE PAGES

NOTE: The portion of the text affected by the changes is indicated by a vertical line in the outer margins of the page. Changes to illustrations are indicated by miniature pointing hands. Changes to wiring diagrams are indicated by shaded areas.

Dates of issue for original and changed pages are:

Original 0 1 March 2003

TOTAL NUMBER OF PAGES IN THIS MANUAL IS 44, CONSISTING OF THE FOLLOWING:

Page No.	*Change No.	Page No.	*Change No.	Page No.	*Change No.
Title	0				
A	0				
i - ii	0				
1-1 - 1-7	0				
1-8 Blank	0				
2-1 - 2-6	0				
3-1 - 3-11	0				
3-12 Blank	0				
4-1 - 4-3	0				
4-4 Blank	0				
5-1 - 5-3	0				
5-4 Blank	0				
6-1 - 6-6	0				

*Zero in this column indicates an original page

TABLE OF CONTENTS

Chapter		Page
1	REPAIR CYCLE ASSET MANAGEMENT SYSTEM	1-1
1.1	Purpose.....	1-1
1.2	Scope.....	1-1
1.3	Definition of Terms.....	1-1
1.4	General Concept of Repair.....	1-2
1.5	Repair Cycle Processing of XB Coded Items	1-2
1.6	Source, Maintenance and Recoverability (SMR) Code Conflicts	1-3
1.7	Depot Overhaul and On-Condition Repair of Repairable Assets.....	1-3
1.8	Uniform Criteria for Estimating Repair Costs for Use in Making Repair Decisions.....	1-4
1.9	Reusable Containers	1-6
2	THE REPAIR CYCLE ASSET MANAGEMENT SYSTEM	2-1
2.1	Purpose.....	2-1
2.2	Physical Layout	2-1
2.3	Asset Scheduling	2-1
2.4	Scheduling Methods	2-2
2.5	Scheduling Excess Position Items	2-2
2.6	Scheduling Components Requiring Multiple Shop Processing	2-2
2.7	Repair Cycle Asset Control	2-2
2.8	Asset Tracking.....	2-3
2.9	DIFM Listing and Reconciliation	2-3
2.10	Verification Procedures	2-4
2.11	Shop Interface with Production Scheduling	2-4
2.12	Pickup and Delivery of Repairable Items.....	2-5
3	MAINTENANCE PROCESSING OF REPAIR CYCLE ASSETS	3-1
3.1	Purpose.....	3-1
3.2	Processing Classified Assets	3-1
3.3	Processing Items Awaiting Parts	3-1
3.4	Processing Maintenance Turnaround (TRN) Transactions	3-2
3.5	Documenting Maintenance Turnaround (TRN) Transactions.....	3-3
3.6	Processing Repairables for Units Supported by a Main Operating Base.....	3-3
3.7	Use of Memo Due-Outs.....	3-3
3.8	Supply Points.....	3-4
3.9	Processing Supply Assets Requiring Functional Check	3-4
3.10	Due-Out Cancellations	3-4
3.11	Processing Assets for Bench Check	3-4
3.12	Maintenance Preparation for Turn-in of Assets to Supply	3-5
3.13	Asset Turn-in to Supply	3-6
4	INSPECTION OF REPAIR CYCLE ASSETS	4-1
4.1	Authorized Inspectors and their Responsibilities	4-1
4.2	Base Inspection Stamps.....	4-1
5	MAINTENANCE PROCESSING OF WARRANTY ITEMS	5-1
5.1	Special Handling of Warranty Items	5-1
5.2	Engine Warranties	5-1
6	BASE REPAIR CAPABILITY, SELF SUFFICIENCY AND AUTHORIZED REPAIR CAPABILITY	6-1

6.1	Purpose.....	6-1
6.2	General.....	6-1
6.3	Measuring Base Repair Capability and Base Self Sufficiency.....	6-1
6.4	Base Repair Guidelines	6-1
6.5	Request for Increasing Base Repair Authorization	6-3

LIST OF ILLUSTRATIONS

Number	Title	Page
4-1	Sample Enlarged Illustration of Base Level Inspection Stamp	4-3
5-1	Flowchart of Warranty Decision Process	5-3

LIST OF TABLES

Number	Title	Page
1-1	When to Use NRTS Codes.....	1-6
2-1	DIFM Status Codes.....	2-5
3-1	How to Use Condition Tags/Labels	3-8
3-2	Required Entries For Condition Tags/Labels.....	3-10
6-1	How to Process Requests to Increase Base Level Repair Authority	6-3
6-2	Acronyms	6-4

CHAPTER 1

REPAIR CYCLE ASSET MANAGEMENT SYSTEM

1.1 PURPOSE.

This Technical Order (TO) establishes policy and provides procedures for managing repair cycle assets. Inherent in the management of repair cycle assets is the responsibility to seek ways to maximize equipment repair capability at all levels of maintenance. This TO implements the policy established in AFR 66-14, The US Air Force Equipment Maintenance Program and AFR 66-1, Maintenance Management Policy. Procedures are also included to integrate maintenance and supply data. Each demand upon supply for a serviceable item receives a document number which maintenance records on the AFTO FORM 350, Repairable Item Processing Tag. This merging of data provides the means to:

- 1.1.1 Identify the repair cycle assets.
- 1.1.2 Determine, establish, and adjust stock levels.
- 1.1.3 Compute world-wide spares requirements for repairable items.

1.2 SCOPE.

The provisions of this TO apply to all maintenance activities within the Air Force. SAC will publish the repairable processing procedures for intercontinental ballistic missile activities. AFR 66-267, Maintenance Data Collection System, and TO 00-20-14, Air Force Metrology and Calibration Program, contain procedures for PMEL managed Test, Measurement, and Diagnostic Equipment (TMDE). Major commands will ensure off-base units or dispersed operating locations provide repair cycle data to the supporting supply unit.

NOTE

When considered a better method, and computer capability exists, major commands may direct the use of automated data systems in lieu of the requirements outlined in this TO. This does not negate the required entries on forms forwarded with equipment/components.

1.3 DEFINITION OF TERMS.

- 1.3.1 AWP Validation Listing (D19). Daily listing of AWP repair part due-outs, corresponding due-ins, and status.
- 1.3.2 Daily Document Register (DO4). A daily register which provides supply customers a comprehensive review of all customer transactions. It also identifies transactions that may require further analysis or action. This report is in document number sequence and reflects supply action resulting from customer inputs for the previous day. It is for use at the shop level and provides the shop a ready reference for reconciling supply actions to customer requirements.
- 1.3.3 Demand Code. A one digit code used on issue requests to indicate how to accumulate demand information for stock leveling and DIFM control (e.g., recurring-R; initial issue-I; nonrecurring-N; etc.).
- 1.3.4 Due In From Maintenance (DIFM) List (Repair Cycle Asset Management List). Provides a current inventory of DIFM assets for use by maintenance and supply to assure positive control and to reconcile supply and maintenance records. The listing categorizes items by the maintenance repair shop and national stock number (NSN). The summary data provides supply and maintenance managers statistics to measure the effectiveness of the DIFM program.
- 1.3.5 Due-Out. An obligation assumed and recorded by any supply echelon to issue at a subsequent date; commonly referred to as a backorder.
 - 1.3.5.1 Firm Due-Out. A due-out for which supply requisitioning action has taken place to satisfy the requirement.
 - 1.3.5.2 Memo Due-Out. A due-out for which no supply requisitioning action has taken place to satisfy the requirement.
- 1.3.6 Due-Out Cancellation. Deletion of a previously established due-out (either memo or firm).
- 1.3.7 Issue Request. A requirement placed on supply by maintenance for a spare, repair part, or bit and piece, etc.

TO 00-20-3

1.3.8 Maintenance Priority Code (MPC). A code assigned to repair cycle items based upon the stockage position of the item. MPC codes include: 3, AFLC critical item; 4, item required for forecasted base requirements; 7, item excess to base requirements; L, less than 10 days stock on hand and due-outs exists; and T, less than 10 days stock on hand and no due-outs.

1.3.9 Maintenance Turnaround (TRN). The means to record demand data in the supply system for either repairs in place or removal, repair, and reinstallation of a recoverable item without ordering a replacement item.

1.3.10 Production Scheduler (PS). For the purpose of this technical order (TO), the term production scheduler applies to any individual or function that schedules repair cycle assets into the performing work center for repair.

1.3.11 Repair Cycle Assets. Any recoverable item with an expendability, recoverability, repairability category (ERRC) code XD or XF.

1.3.12 Repairable Asset Center (RAC). A function which may be applicable to decentralized maintenance organizations that manages assets in the repair cycle.

1.3.13 Repairable Asset Control Center (RACC). An integrated function consisting of a repairable processing center and the repair cycle support section comprised of maintenance/supply activities which control repair cycle assets. Each major functional activity maintains individual control over its own personnel and functions. This function may be used in centralized maintenance organizations.

1.3.14 Repairable Processing Center (RPC). A function within production control to control, throughout the repair cycle, all assemblies, accessories, and components removed from end items.

1.3.15 Requisition. A request or demand for supplies levied on wholesale distribution agencies.

1.3.16 Retested OK (RTOK). Items returned from the base to the repair facility as NRTS which are retested and found to be operable and not defective.

1.3.17 Spare. For the purpose of this technical order, a spare is an assembly, subassembly, or shop replaceable unit (SRU) in the repair cycle for which supply issued or backordered a like item.

1.3.18 Supply Transaction Identification Code. A three digit code identifying an internal transaction with the Standard Base Supply System (e.g., issue-ISU; turn in-TIN; etc.).

1.4 GENERAL CONCEPT OF REPAIR.

The basic concept is to perform repairs at the lowest level of maintenance, to the fullest extent possible, consistent with good management and quality assurance. Troubleshooting and repair will be extended to the lowest possible component or part. Repair is not limited to procedures found in equipment technical directives. Unless specifically prohibited, procedures in general maintenance TOs and common sense maintenance actions should also be used to aggressively pursue maximum local repair. Defective components will be either replaced with a like item; repaired in place; or removed, repaired and installed. Care must be taken to ensure XB items are not disposed of simply because they are classified as nonrecoverable. These XB items must be considered for repair when it is cost effective or warranted by mission requirements.

1.5 REPAIR CYCLE PROCESSING OF XB CODED ITEMS.

1.5.1 ERRC codes do not dictate maintenance policy. They are primarily for use by supply to decide how to manage parts in the supply system. TO 00-25-195, Source, Maintenance, and Recoverability Coding of Air Force Weapons, Systems, and Equipments governs maintenance policy which authorizes repair of XB items when the Source, Maintenance, and Recoverability (SMR) code includes maintenance repair level (MRL) code B. Unusual situations may also make it necessary to repair parts even though the SMR code indicates the part is not repairable.

1.5.2 Specific equipment TOs do not prescribe repair actions for individual XB items; however, general purpose TOs and common sense maintenance actions can be used to repair these items. If the repair of an XB item is prudent, but it does require parts, tools, test equipment, technical data, or skills having sole application to the item or its repair, the item's SMR and ERRC designators may qualify for change.

NOTE

The design of some XB items requires routine periodic maintenance, such as adjustment and lubrication. A TO should designate when and how to accomplish this kind of “designed for” maintenance. This type of work, which is effectively custodial care, is not repair.

1.5.3 Process and control XB items through the normal maintenance functions using the same procedures as for controlling XD and XF items; however, accumulation of repair cycle data and DIFM procedures do not apply. Order parts required to repair XB items with TEX code E using the SRD and serial number of the aircraft/end item or the AWP component document number. When available, provide the demand processing unit the technical order, figure, and index for parts ordered against XB items. Units may develop local procedures for monitoring and controlling parts ordered against XB items. Control numbers, such as AFTO FORM 350 tag numbers, may be used in the MARK FOR field for this purpose in lieu of an aircraft serial number. Turn in XB items in accordance with AFR 67-23, Standard Base Supply Customer’s Guide.

1.6 SOURCE, MAINTENANCE AND RECOVERABILITY (SMR) CODE CONFLICTS.

The SMR code reflects both maintenance and supply management techniques and dictates the ERRC code. Repair guidance, including specific restrictions, is provided in the applicable system or equipment -6 TO. For equipment that does not have a -6 TO, repair restrictions may be provided in other equipment TOs, such as the -2, -3, or -6 WC. The SMR code, ERRC code, and repair restrictions in the equipment TO should be compatible. If an incompatibility exists, action must be taken to correct the codes or to add, delete, or correct the repair restrictions. SMR codes are corrected in accordance with TO 00-25-195. ERRC codes are corrected in accordance with AFM 67-1, USAF Supply Manual, volume II, part two, chapter 27. Repair restrictions are added, deleted, or corrected in the equipment TO by submitting an AFTO FORM 22 in accordance with TO 00-5-1, AF Technical Order System. In cases where the SMR code or repair restrictions are not consistent with existing repair capability, take action in accordance with Section VI of this TO.

1.7 DEPOT OVERHAUL AND ON-CONDITION REPAIR OF REPARABLE ASSETS.

Reparable assets received in depot facilities (including contractors) will be inspected and functionally tested as necessary. Condition and applicability of overhaul or on-condition repair methods is determined based on guidelines stated below in the applicable equipment repair manual.

1.7.1 Overhaul Criteria. Selected equipment items, by reason of their design characteristics, function, or application are predetermined to require a complete overhaul whenever returned to the depot in a reparable status. Other items may be committed to a complete overhaul on a judgment basis during receiving inspection and functional test or by direction of the IM as stated in work specifications. Items generally requiring complete overhaul include:

1.7.1.1 Time Change Items (TCI) whose allowable operating time has expired. TCIs returned due to premature failure which the IM determines a complete overhaul is the more cost effective method based on remaining time of the item will be evaluated on a case-by-case basis.

1.7.1.2 Items involved in a weapon system accident.

1.7.1.3 Items which have evidence of contamination.

1.7.1.4 Items of which the condition cannot be determined.

NOTE

Avionic items, for which complete overhaul is not practical, are handled as on-condition repair as outlined below.

1.7.2 On-condition maintenance will be accomplished for those items whose circumstances are not outlined above. The extent of overhaul when not specified, is that amount of work required to return the equipment to technical order specification and meet all operational and design requirements. Use that part of the repair manual which contains the detailed requirements and procedures for on-condition repair to include total unit inspection, test and verification processes within existing capability to assure complete serviceability of the required item.

NOTE

Whenever it is found that the overhaul/repair manual for an item does not contain adequate instructions, a deficiency report (AFTO FORM 22) will be submitted to the responsible item manager.

1.7.3 AFLC validates the condition of reparable property being returned for repair. The retest OK (RTOK) program (AFLCR 66-15, chapter 16) provides the means by which this responsibility is fulfilled.

1.7.3.1 When the RTOK rate on an item reaches 10 percent, the IM will advise the base and using command, and work with them to resolve the problems.

1.7.3.2 Reparable items being returned for repair must have a properly completed AFTO FORM 350 attached so that the repair facility can determine the base from which the item came.

1.7.3.3 When the IM advises a base that the RTOK rate on their item is 10 percent or more, the base must attempt to discover why the high RTOK rate exists. The IM must work closely with the base on this investigation since many factors outside of the base's management responsibility can affect the rate, e.g., technical data, support equipment, software.

1.7.3.4 Items with a reported RTOK rate of 10 percent or less are still candidates for improvement and should be sampled on a biannual basis to ensure that the RTOK rate has not increased. Although priority management action should be addressed to 10 percent or above, any item with a RTOK rate of 10 percent or below should be studied and its management improved as resources permit.

1.8 UNIFORM CRITERIA FOR ESTIMATING REPAIR COSTS FOR USE IN MAKING REPAIR DECISIONS.

This section supplements DODI 7220-21. It establishes standard criteria and principles for use by all Air Force activities in estimating the cost of repair to equipment as a factor in making repair decisions. Other factors which bear on the repair decision include the availability of a replacement item or suitable substitute, future anticipated needs for the item, the mission impact of not repairing the item, anticipated permanence of the repair (i.e., will it be back in the shop again next week), and availability of resources to accomplish the repair (qualified personnel, tools, equipment, etc.). Maintenance managers must consider these factors in making repair decisions with the goal of providing optimum mission support at the lowest cost.

1.8.1 Base level personnel will not condemn ERRC coded XD items with a unit cost of \$1000, or more, unless beyond total repair (e.g., crushed, burned, battle damaged). Return XD coded items to a depot repair facility for the repair determination when they are beyond base repair capability. (XD items in excess of \$1000 unit cost may be condemned with prior Item Manager and/or Equipment Specialist approval. This waiver can be made for the specific NSN on a one time basis; or may be granted for continuing approval for the NSN restricted to one or more designated bases; or continuing approval Air Force wide).

1.8.2 Operating locations may condemn XF coded items, and XD coded items having a unit cost of less than \$1000, if supported by an economic repair determination.

1.8.3 Repair/condemnation criteria for equipment items, ERRC NF __ is contained in AFR 67-23, chapter 8, TO 46A-1-1, TO 00-25-211 and other applicable directives.

1.8.4 Economical repair of Air Force property is 75 percent of the current stock list price unless otherwise specified in TOs or other published directives. If you know or suspect that the stock list price is 3 years old or older take cost escalations into account before applying the 75 percent unit cost criteria. Current replacement cost data may be requested from the IM. Base cost estimates on accomplishment of the required maintenance at the nearest government or commercial facility which has the repair capability and performs similar maintenance. Use the cost elements discussed in paragraphs (1) through (8) in estimating repair costs.

1.8.4.1 Direct labor is the military or civilian labor which you can identify specifically to the repair job. Use the job-standard or job-average man-hours required for the repair action. If a job-standard or job-average is not available, estimate the repair hours based on experience, then apply the military or civilian labor rate to the man-hours required for repair. Labor rates for military personnel will be weighted-average military wage rate for the involved work center. Base the labor rate for civilian personnel on the rate for the applicable job skill and level in the local geographic area of the repairing activity. Therefore, contact the comptroller of the unit concerned for the average hourly rate scale. When determining costs of civilian labor on the basis of annual salaries, compute these costs by adding a factor of 9.0 percent to the gross pay as shown in current pay tables. When determining costs of civilian labor on the basis of direct hours applied, increase the gross pay

reflected in current civilian pay scales by a factor of 29.0 percent for annual/sick leave and fringe benefits. Extract the pay rate scales for military personnel from AFR 173-13, table A20-1, US Air Force Cost and Planning Factors.

1.8.4.2 Direct material costs are the cost of all materials identified with and applied directly to the item or equipment that requires repair. This includes government furnished materials consumed by a contractor in performing all or part of the maintenance job; consumable items obtained from supply stocks costed at the stock list price; items locally procured costed at the latest invoice or quoted price and including any transportation charges; fabricated items priced at expected cost including labor cost as described in paragraph 1.8.a.(1); and indirect expenses described in paragraph 1.8.a.(3). When the repair involves use of components and assemblies on an exchange basis, cost such components and assemblies at the exchange price; i.e., stock list price less credit for the return of the reparable components. The exchange price may be established as a percent of the stock list price provided it reflects the estimated cost to repair the components or assemblies. If the repair cost is not known, cost estimate exchange items (issue of a serviceable for a reparable) at 35 percent of the stock list price.

1.8.4.3 Indirect expenses may be included in the estimated cost of repair for an item or piece of equipment. Since it is impossible to identify specific indirect expenses for each item, determine this cost element by applying an indirect expense rate to the estimated direct cost expenditures. The indirect costs included in the indirect expense rate represent a portion of the production expenses incurred within or identifiable to the work center or organization performing the repair work; a portion of the general and administrative expenses incurred in management or supervision; and the costs of maintaining the repair facility. A factor of 33 percent of direct expenses may be used to cover indirect expenses if they are not known. The estimated total cost of repair will then be the direct expense estimate multiplied by 1.33.

1.8.4.4 Other direct charges include the cost of contractual services required incident to or identifiable with the performance of all or a portion of the specific maintenance job. If a contractor is to perform a significant portion of the maintenance job, include the total contract price or the estimated total contract price for the repair. When the item or equipment cannot be repaired on site and preparing the item for shipment will incur costs, include these costs in the estimated repair costs. For reparable material located overseas where there is no theater repair capability, include the cost of freight to the continental United States repair facility as an element of cost. Exclude the cost of freight in all other cases. Include any other charges required to accomplish the required maintenance and directly identifiable to the material although not specifically mentioned herein.

1.8.4.5 When there is a modification or TCTO concurrent with the repair, exclude the cost of the modification or TCTO compliance from the estimated repair cost.

1.8.4.6 Do not include items such as tires, anti-freeze, and fuel which are incident to normal operation of equipment in the cost of repair. However, include these items if they are replaced as a result of an accident.

1.8.4.7 Do not include the cost to overhaul or replace accessory items such as sirens, tool kits, or two-way radios, used to adapt the equipment for special usage, in the estimated repair cost.

1.8.4.8 A sample computation follows:

DATA REQUIRED:	
Item:	Circuit board
ERRC:	XF3
Stock list price:	\$842.00
75 percent of stock list price:	\$631.50
Job standard:	33 hours
Civilian pay for work center:	\$12.00/hour
Benefits:	29.0 percent of \$3.48/hour
Total wage rate:	\$15.48/hour
Direct labor cost:	\$15.48/hour x 33 hours = \$510.84
Direct material total:	\$38.60
Indirect expense:	33 percent

COMPUTATION:	
\$510.84	direct labor
<u>38.60</u>	<u>material</u>
\$549.44	total material and labor
<u>x 1.33</u>	indirect expense rate
\$730.76	total repair cost

DECISION: Item is XF3, condemnable at base level. The estimated total repair cost exceeds 75 percent of the current stock list price; therefore, the item may be condemned at base level if other repair decision factors support the condemnation decision.

1.9 REUSABLE CONTAINERS.

Do not destroy or discard reusable containers. The maintenance activity will make maximum use of reusable containers. Reusable containers will normally be kept with the asset during in-shop repair. However, if the containers cannot be stored with the item due to size and shape, store the containers in an area mutually agreed upon by maintenance and supply. Use the AF FORM 451, Request for Packaging Service, to request local fabrication of new containers in the event the original containers are lost, damaged, or destroyed.

Table 1-1. When to Use NRTS Codes

RULE	A If an asset is a DIFM item and repair cannot be completed due to	B then assign action taken code
	<p>NOTE</p> <p>Every effort must be made to repair XF items prior to making a NRTS decision.</p>	
1	Bench checked-NRTS (not reparable this station). Repair not authorized. Shop is not authorized to accomplish the repair. This code shall be used only when the repair required to return an item to serviceable status is specifically prohibited by current technical directives. This code shall not be used due to lack of authority for equipment, tools, facilities, skills, parts or technical data.	1
2	Bench checked-NRTS-lack of equipment, tools or facilities. Repair not prohibited but cannot be accomplished because authorized equipment, tools or facilities are not available.	2
3	Bench checked-NRTS-lack of technical skills. Repair cannot be accomplished due to lack of technically qualified people.	3
4	See Section III, paragraph 3.3.f.	4
5	Bench checked-NRTS-shop backlog. Repair cannot be accomplished due to excessive shop backlog.	5
	<p>NOTE</p> <p>Only use NRTS code 5 after MAJCOM or IM disapproval of a formal request to defer maintenance.</p>	
6	Bench checked-NRTS-lack of technical data. Repair cannot be accomplished due to lack of maintenance manuals, drawings, etc., which describe detailed repair procedures and requirements.	6

Table 1-1. When to Use NRTS Codes - Continued

RULE	A If an asset is a DIFM item and repair cannot be completed due to	B then assign action taken code
7	Bench checked-NRTS-lack of equipment, tools, facilities, skills, parts or technical data. Repair authorized but cannot be accomplished due to lack of authorization to obtain or possess required equipment, tools, facilities, skills, parts or technical data.	7
8	Bench checked-return to depots. Return to depots by direction of (SPM) or (IM). Use only when items that are authorized for repair at the operating location are directed to be returned to depot facilities by specific written or verbal communication from the IM or SPM, or when items are to be returned to depot facilities for modification in accordance with a Time Compliance Technical Order (TCTO), or as UMR exhibits. The AFTO FORM 350, block 15, will be annotated to identify ALC and name of the individual (IM/SPM) who verbally authorized the return or other media of authorization (including phone number, if applicable).	8
9	Bench checked-condemned. Item cannot be repaired and is to be processed for condemnation, reclamation or salvage. This code will also be used when a "condemned" condition is discovered during field maintenance disassembly or repair.	9
10	Bench checked-NRTS-warranty item: repair not authorized, item under warranty.	0

CHAPTER 2

THE REPAIR CYCLE ASSET MANAGEMENT SYSTEM

2.1 PURPOSE.

This section prescribes the physical layout of the repair cycle asset management system, assigns scheduling responsibility and methodology, and establishes control procedures. It also addresses DIFM procedures, verification procedures and the shop interface with production scheduling.

2.2 PHYSICAL LAYOUT.

Route all reparable item documentation through the maintenance function responsible for processing reparable assets. The items will be scheduled through the shops for repair and turned into maintenance for reinstallation. The maintenance function responsible for this may be the RPC, RACC, RAC or as directed by the MAJCOM. When used, the RPC, RACC or RAC should be physically located in the center of the repair complex surrounded by the supported shops when possible.

2.2.1 For those shops not physically located within reasonable walking distance, a PS function may be located in or near the shop to achieve the desired scheduling, location, and status accuracy. The PS will report changes promptly to supply. This will reduce delays in updating the computer records.

2.2.2 The positioning of the reparable processing function and the actual routing of reparable parts depend on:

2.2.2.1 The physical layout of the maintenance complex.

2.2.2.2 The organizational structure.

2.2.2.3 The maintenance philosophy.

2.2.3 Locate the production scheduler (PS) in either:

2.2.3.1 The shop (the MAJCOM may decide production scheduling is a shop responsibility and assign control status update responsibility accordingly).

2.2.3.2 A separate production control (PC) function.

2.2.3.3 A Reparable Processing Center (RPC).

2.2.3.4 A Reparable Asset Control Center (RACC).

2.2.3.5 Multiple functions when the position and duties for PS represent a number of different individuals assigned to an RPC/PC, RACC or shop.

2.2.3.6 As directed by the MAJCOM.

2.3 ASSET SCHEDULING.

Scheduling and controlling repair cycle assets are production scheduler (PS) responsibilities. The PS will report current repair cycle asset location and condition status and maintain surveillance of items. Table 2-1 presents the DIFM status codes used for this purpose.

2.3.1 When the PS receives copies 3 and 4 of the DD FORM 1348-1 a DIFM file will be established. Upon receipt of the unserviceable asset and before routing it for repair, the PS will ensure the supply document number, federal stock class (FSC), and national stock number (NSN) on the AFTO FORM 350 attached to the item agree with the document number, FSC, and NSN on the DD FORM 1348-1. Each AFTO FORM 350 will contain the date the item was scheduled or received into the shop in the base repair cycle data block of PART II. The PS will detach this part of the form; enter the DIFM document number shown on the DD FORM 1348-1 on the AFTO FORM 350, PART II; and check the part number entry in block II of the AFTO FORM 350 against:

2.3.1.1 The data plate.

TO 00-20-3

2.3.1.2 The number stamped, stenciled, or embossed on the item.

2.3.1.3 The parts catalog.

2.3.2 Correct any error in PART II and annotate the correct part number in block 18. If the data plate is in error, advise the work center to update the data plate.

2.3.3 When using visible files, attach the DD FORMS 1348-1, copies 3 and 4 to the AFTO FORM 350, PART II, before filing. Decentralized maintenance organizations will use the AFTO FORM 350, PART II, in the shop for scheduling. The PS and shop chief must ensure each item scheduled into the shops is processed as scheduled.

2.4 SCHEDULING METHODS.

Production schedulers must establish shop production flow times, daily management of in-shop production, and follow through on each part scheduled into the shops. This ensures processing all items quickly.

2.4.1 Assign and adjust in-shop priorities based on the applicable maintenance needs. Assign repair priorities for components the same priority as the end item.

2.4.2 There are two methods for centralized organizations to control and schedule repair cycle assets:

2.4.2.1 Hourly Scheduling. In this method, individual repair cycle assets are scheduled and tracked throughout the repair process. If the estimated repair time elapses before work completion, the PS contacts the work center to find the cause and set a new job completion time. Items will remain in AWM status until work actually begins.

2.4.2.2 Block Scheduling. In this method, the PS schedules block quantities of parts into the work center. INW (in work) status is assigned to all block items scheduled. The PS then coordinates with the work center throughout the day to ensure adequate production flow.

2.4.3 For decentralized organizations, MAJCOMs will establish unique procedures which ensure positive control and timely repair of assets.

2.5 SCHEDULING EXCESS POSITION ITEMS.

Items which are in an excess position (MPC 7) will be scheduled for repair after all other priority work is accomplished.

2.6 SCHEDULING COMPONENTS REQUIRING MULTIPLE SHOP PROCESSING.

Process items needing multiple shop actions in the same manner as other scheduled work. However, the PS or the originating shop will mark involved shops in block 15 of the AFTO FORM 350, PART I. Each shop will use the same repair priority first assigned. Upon completion of work, shops will:

2.6.1 Notify the PS.

2.6.2 Annotate block 15 of the AFTO FORM 350 to reflect that shop's action.

2.6.3 Route to the next shop. Each subsequent shop will process the item in the same manner. Close coordination between the PS and the shops is essential to ensure timely movement of items between the shops involved.

2.7 REPAIR CYCLE ASSET CONTROL.

A repair cycle asset is a part for which base supply normally requires a one for one trade. Repair cycle assets are considered part of the total base asset position, whether serviceable or repairable.

2.7.1 A demand on supply for an XD or XF coded asset suspenses the asset in the DIFM control system. This will ensure a one-for-one exchange by tracking each asset through the repair cycle until returned to supply. The quick return of the asset to supply speeds up the stock replenishment action.

2.7.2 An AFTO FORM 350 is required when a repair cycle asset is removed from an end item and for items requiring bench check and/or repair. A repair cycle asset issued by base supply will be accompanied by an issue document (DD FORM 1348-1). The DD FORM 1348-1, together with the AFTO FORM 350 provides a means for controlling repairable items, and must be returned to base supply to clear the transaction. Automated products may also be used to help control these assets.

2.7.3 The production scheduler will assign the appropriate maintenance priority to bench check and repair all items.

2.7.3.1 Do not place removed critical (MPC 3) items in unserviceable (reparable) pickup points. Deliver them directly to the appropriate scheduling function.

2.7.3.2 Advise supply of all maintenance repair determinations/actions on a critical item within 24 hours from removal during normal working days. Turn in NRTS code 1 items to supply within 24 hours from removal during normal working days.

2.7.3.3 Process DIFM assets through the repair cycle and return them to supply based on need and criticality according to the criteria established by the MAJCOM. Review the daily DIFM list and verify its accuracy. If an item is beyond repair, prepare the appropriate NRTS documentation and return the asset expeditiously to supply to ensure early replenishment of stock levels.

2.8 ASSET TRACKING.

Use visible files, standard PC boards, locally designed PC boards, or automated management systems to control repair cycle assets. Determinations as to the types of boards or visible files used will be based on local requirements. Sufficient data must be available on the boards or in the visible files to control all items in the maintenance repair cycle; that is, each item in INW categories. AWP and active commodity TCTOs may be portrayed on separate boards or files. PS does not need control boards or files for AWP when the supply activity controls the AWP holding area.

2.8.1 When using the hourly scheduling method and standard PC boards, the boards will reflect each item for control during the repair cycle. Divide and placard visual files by shop. The number of visual files used for each shop will depend upon the number of items normally in INW and AWM status, plus a suitable overage factor. Apply the following procedures when using these PC boards.

2.8.1.1 The PC boards have visible files on the left side with a retractable tape peg attached to each file which can be extended and inserted in a row of horizontal holes to the right. These holes to the right of the visual files represent hours or days as specified by a scale placed above these holes. Move vertical tapes to the right as required to represent current time or date. The number of holes a tape peg is extended past the vertical tape indicates the time remaining to complete the repair.

2.8.1.2 The position of the individual tape peg will indicate the item status. A retracted tape peg indicates the item is AWM. An extended tape peg indicates the item is in the shop and the peg location will indicate, in hourly increments, the completion time of the job.

2.8.1.3 Move the current hour or day vertical tapes to the right in increments, as time passes. The PS notifies the shop supervisors when an asset is overdue as represented by the vertical tape intersecting a peg representing an asset. The PS and shop chief establish new estimated job completion times for items not completed as scheduled.

2.8.1.4 Clearly mark and use a separate PC board or portion of a PC board to maintain status of all applicable commodity TCTOs by each shop. Indicate by a stationary peg, set at the appropriate hole on the right, the total number of units which require TCTO compliance. Each hole will represent one unit. Indicate the number of units complied with by extending the tape peg to the right until the two pegs meet, at which time the TCTO is complete and you remove the pegs from the control board.

2.8.2 If you elect hourly scheduling and locally designed boards, the boards must provide control of all assets, depict separate INW and AWM status, and all applicable commodity TCTOs for each shop. The complexity of the locally designed board will depend on the degree of control desired.

2.8.3 Instead of PC boards for block scheduling, you may use a visible file. These files will reflect items in AWM, INW and active TCTOs by commodity class. Subdivide these three categories within the file by each shop.

2.9 DIFM LISTING AND RECONCILIATION.

2.9.1 Supply produces the DIFM Listing from supply records. This aids maintenance activities in controlling reparable processing and DIFM assets. The listing also aids in scheduling adjustments and setting repair priority. The DIFM Listing is available in several format options.

2.9.2 The PS will monitor the DIFM suspense file and review the DIFM listing daily. This will ensure prompt processing of parts through repair channels, as well as maintaining the current location of each DIFM part. Reconcile with supply the current DIFM status, part location and any discrepancies in accordance with AFR 67-23, Chapter 6.

TO 00-20-3

2.9.2.1 Complete this review in a timely manner so supply can correct records as soon as possible. The method used to advise supply of DIFM location and status changes will be a joint determination by the PS and supply.

2.9.2.2 Perform a quarterly DIFM reconciliation on a coordinated date as prescribed in AFR 67-23, Chapter 6.

2.9.2.3 Repair cycle asset control effectiveness will be measured by the speed with which items of greatest importance are repaired or processed.

2.10 VERIFICATION PROCEDURES.

A prompt responsive verification process is the key to success in preventing unwarranted NMC/PMC conditions, cannibalization, priority system abuses, and unnecessary fund expenditures.

2.10.1 Verify all UND A requests. Complete the verification worksheet as prescribed by MAJCOM directives. Completion of the worksheet requires the verifier to obtain or confirm information from functions within the maintenance complex such as job control, production control, RCM, and the shop, as well as from base supply. Verification of AR, AO, and AU requirements do not need to be documented on the worksheet. UND B requests, including BR, BO, and BU, will be verified by the PS or the shop prior to call in to supply. Unless processed as “fill or kill”, automatic backorder action will be taken for UND B.

2.10.2 Verification information usually centers around the following types of data:

2.10.2.1 Is the item on bench stock and available?

2.10.2.2 Status and location of any DIFM.

2.10.2.3 Is the item repairable?

2.10.2.4 Are any assets in the tail number bins?

2.10.2.5 Can the item be locally manufactured?

2.10.2.6 Is the next higher system assembly available?

2.10.2.7 Is the assembly a spare?

2.10.2.8 Possibility of cannibalization.

2.10.2.9 Are there suitable substitutes?

2.10.2.10 Accuracy of requisition data in accordance with AFR 67-23.

2.11 SHOP INTERFACE WITH PRODUCTION SCHEDULING.

The shop chief will ensure PS is continually aware of the status of repairable assets.

2.11.1 Route repairable items removed from weapon or support systems to the shop through the PS. The shop chief will ensure the following:

2.11.1.1 An AFTO FORM 349 is initiated using the data on the AFTO FORM 350, PART I.

2.11.1.2 Shop personnel inspect each repairable item to determine whether the items are serviceable or within the scope of operating location repair. This inspection consists of determining the item's condition, including a comprehensive functional test if required. Cartridge and propellant actuated devices removed from weapon or support systems for expiration of authorized service life will not require an inspection or functional test.

2.11.1.3 The PS is notified of any change in status or location of a DIFM asset, either by routing an item through the PS with an AFTO FORM 350 attached, when required, or by notifying the PS by telephone.

2.11.1.4 A new AFTO FORM 350 is created for each recoverable subassembly removed from an assembly. Route the recoverable subassembly to the PS before repair as appropriate. If it is anticipated that a replacement subassembly is not available or only minor repairs to the subassembly will be required, the shop chief can elect not to send the subassembly through the PS. However, even though there was no demand for the subassembly on supply (or was “fill or kill”), prepare and

forward an AFTO FORM 350, PART II, to the PS. If the subassembly is serviceable (no defect), notify the PS to destroy the AFTO FORM 350, PART II. If the subassembly is repaired, notify the PS (advise of the appropriate action taken code) to generate a maintenance turnaround (TRN) transaction.

2.11.2 Technicians may require repair cycle items in a quantity greater than one. Supply will process the request for the total needed using separate document numbers for each unit unless authorized multiple issues. In the event of a multiple DIFM issue, the maintenance requester will initiate one AFTO FORM 350 for the total quantity of items removed. If the total quantity is not sent through the shop at one time, the PS will ensure that each group or item has a separate AFTO FORM 350. Each form will contain the same supply document number in order to account for the total quantity.

2.11.3 Due to size, hazards, security, or distance, you may elect not to physically route the item through the PS. In such cases, the shop or work center supervisor will be responsible for:

2.11.3.1 Advising the PS of asset location.

2.11.3.2 Notifying the PS upon receipt or removal of an item from the equipment.

2.11.3.3 Forwarding the AFTO FORM 350, PART II to the PS.

2.11.3.4 Notifying the PS of status changes.

2.11.4 The shop will record the action taken code from the AFTO FORM 350 in block 15B of the AFTO FORM 350, PART I, prior to sending it to the PS. The PS will transcribe the action taken code from the AFTO FORM 350, PART I, block 15B, to block 20 of the AFTO FORM 350, PART II. For status changes, the PS may initiate AF FORM 1998 for item location and condition status and forward them to supply to update the DIFM listing/status. For completed maintenance actions, the PS will complete the AFTO FORM 350, PART II, and forward it with a copy of the DD FORM 1348-1 for return to supply. For TCTOs accomplished by intermediate maintenance, the shop will record an X in block 15B of the AFTO FORM 350, PART I. The PS will transcribe this information to block 20 of the AFTO FORM 350, PART II. This will preclude erroneous indication of a NRTS or condemnation action because of a numeric TCTO data code recorded in columns C, D, and E of the AFTO FORM 349 for the removal action. Enter NRTS code 8 in block 20 of the AFTO FORM 350, PART II, for items returned to a depot facility for TCTO compliance.

2.11.5 After completing maintenance processing of an item, the PS will suspense the DD FORM 1348-1 in a completed file. Retain this until the supply DIFM inventory reconciliation is completed. Dispose of DIFM documents not required by supply to validate the inventory in accordance with AFM 12-50.

2.11.6 The reverse side of the AFTO FORM 350, PART II, contains spaces for recording changes in status that occur during maintenance processing of an item. Post appropriate entries in these spaces in accordance with TO 00-20-2 series to reflect the date the PS received the item.

2.12 PICKUP AND DELIVERY OF REPARABLE ITEMS.

The DCM or Chief of Maintenance will establish pickup points for repair cycle assets and, in coordination with base supply, establish times to check the pickup points to ensure pickup of assets on a timely basis. Do not allow shop production and reparable turn-ins (completed work) to accumulate at these pickup points. Use vehicles with padded containers and restraining devices for transporting sensitive components. Either base supply or the PS will provide reparable pickup services. The determination as to who is assigned pickup and delivery responsibility is a local option unless prescribed by the MAJCOM.

Table 2-1. DIFM Status Codes

CODE	DEFINITION	DETERMINED BY
BLANK	No location established	Maintenance
AWI	Awaiting installation	Maintenance
AWF	Awaiting testing	Maintenance
AWM	Awaiting maintenance	Maintenance
AWP	Awaiting parts with one AWP due-out detail	Program Control (see note 1)
(N)(N)P	AWP with two or more AWP due-out details	Program Control (see note 1)

Table 2-1. DIFM Status Codes - Continued

CODE	DEFINITION	DETERMINED BY
(N) = numeric		
AXC	Aircraft cross-country	Maintenance
BFN	Base funded, nonstandard MAJCOM peculiar repair cycle items	Supply
CEH	Scheduled work order item in BCE hold area	Civil Engineer (BCE)
CMD	CEM mobile detachment	Maintenance
CTE	Contract maintenance (equipment)	Maintenance
CTR	Contract maintenance	Maintenance
DWO	UJC AR/BR retained on system	Maintenance (see note 2)
DWP	Repair cycle item which is a component of another repair cycle item that is in AWP	Maintenance
EWI	Engine components awaiting installation	Maintenance
FEM	Forecasted engine maintenance	Program Control (see note 3)
FSP	Intransit from forward supply point	Supply
FTL	Flight line	Maintenance
FWP	Previous AWP item ready for scheduling and repair	Program Control (see note 4)
INO	Intransit issue (off-base only)	Supply
INR	Intransit return (off-base only)	Supply
INW	In shop	Maintenance
MTM	Maintenance to maintenance	Maintenance
MWI	ICBM item awaiting installation	Maintenance
0AM	Retained on system	Maintenance
RFS	Warehouse refusal	Supply
RPR	Repair and return	Maintenance
TCG	Time change	Maintenance
TIN	Turn-in to supply	Maintenance
TNB	Tail or registration	Maintenance
TOC	TCT0 required on end item	Maintenance
TWP	Bits and pieces required for repair action intransit	Supply
VHM	Scheduled work order item in vehicle maintenance hold area	Maintenance (see note 5)
Z(MM)	Reserved. Assigned by MAJCOM	
NOTES		
<p>1. When the first AWP due-out is set up, the code on the end-item DIFM detail will be changed to AWP under program control. When the second AWP due-out is set up, the code will be changed from AWP to 02P. Further processing increases or decreases the status code counter; that is, sequential processing will result in code assignment AWP, 02P, 03P, 04P, etc... 03P, 02P, AWP, FWP.</p> <p>2. DWO should be assigned to UJC AR/BR requirements when the asset must be retained on the end item or system.</p> <p>3. Status code FEM is assigned when the issue request UJC is AU, BU, or CU, and the delivery destination field is FEM.</p> <p>4. When the last AWP due-out is released or cancelled, the code on the end-item DIFM detail will be changed to FWP under program control.</p> <p>5. Status code VHM can only be applied by vehicle maintenance organization.</p>		

CHAPTER 3

MAINTENANCE PROCESSING OF REPAIR CYCLE ASSETS

3.1 PURPOSE.

This section prescribes specific procedures for processing and documenting repair actions. It also covers use of memo due-outs, due-out cancellation procedures, the establishment of supply points, and asset turn-in procedures.

3.2 PROCESSING CLASSIFIED ASSETS.

Process classified reparable components in the same manner as other components. However, the initiator of the AFTO FORM 350 will indicate on the face of the AFTO FORM 350 that the item is classified. Use a stamp which states, "This Item is Classified ____ and will be handled in accordance with AFR 31-401." For classified components under COMSEC control (i.e., those using the TSEC nomenclature system), use a stamp that states, "This Item is Classified ____ and will be handled in accordance with AFKAG-()" or use bold block lettering, if no stamp is available. The shop responsible for bench check/repair will ensure the security classification of the component is conspicuously visible. The preferred method of marking the classification on components is to stencil with paint or attach a plate with screws or rivets depicting the classification.

3.3 PROCESSING ITEMS AWAITING PARTS.

When a shop requires bit and piece parts, the shop will place a request directly on the demand processing unit. The MAJCOM establishes whether those requests are "fill or kill" or "fill or backorder". For the "fill or kill" option, the requesting shop or PS will verify UJC AU/BU, AR/BR, and AO/BO killed requests. If the MAJCOM directs the "fill or backorder" option, the shop will verify UJC AU/BU, AR/BR, and AO/BO requirements prior to submission. After ordering bits and pieces, the shop will notify the PS that the repair action is awaiting parts. The shop will also provide a new estimate repair completion time.

3.3.1 After processing issue requests, demand processing will notify the shop which items are not available. Under the "fill or kill" option, the requester must verify for reinput by supply or notify PS to perform verification and change the delivery destination code, if required. Shop personnel will then initiate two AFTO FORMs 349 for the reparable item. Code the first AFTO FORM 349 with action taken code C, bench checked repair deferred, in column D of the form. The shop will process this form for maintenance data collection. Enter action taken code "C" in block 14 of the second AFTO FORM 349 and forward it to the PS. Arrange for storage of AWM and AWP parts to ensure minimum asset movement and least effort during processing. If there is no shop storage, shop personnel will forward to PS:

3.3.1.1 The reparable DIFM asset.

3.3.1.2 Available bits and pieces from bench stock or partial issues.

3.3.1.3 The second AFTO FORM 349.

3.3.1.4 The AFTO FORM 350, PART I.

3.3.1.5 DD FORM 1348-1 for issued bits and pieces.

3.3.1.6 AF FORMs 2005 for due-out bits and pieces. Bit and piece due-out document numbers may be entered in block 30 of the second AFTO FORM 349 in lieu of preparing the AF FORM 2005.

3.3.2 When the PS receives the forms from the shop, the PS will update the AFTO FORM 350, PART II, to include the date the item entered AWP status.

3.3.3 Upon receipt of all required bits and pieces, the PS will update the AFTO FORM 350 to indicate the number of days in AWP, update the DIFM status to AWM, and schedule the work into the appropriate shop for repair. In decentralized units, RCM will deliver the item back to the responsible repair shop for scheduling.

3.3.3.1 The AWP monitor will forward to the PS/RCM:

3.3.3.1.1 The reparable item.

3.3.3.1.2 The bits and pieces.

TO 00-20-3

3.3.3.1.3 The AFTO FORMs 349 and 350, PART I.

3.3.3.1.4 The DD FORM 1348-1 for the end item.

3.3.3.2 The PS will:

3.3.3.2.1 Update the AFTO FORM 350 to indicate the number of days in AWP.

3.3.3.2.2 Update the DIFM status to AWM.

3.3.3.2.3 Schedule the work into the shop.

3.3.4 Sometimes bits and pieces required to return a repair cycle item to serviceable status have an extended estimated delivery date. It may be prudent to place another demand on supply for the next higher assembly. For example, when the next higher assembly is a subassembly, the second requisition should be for this subassembly. Maintenance and supply must monitor AWP closely to ensure positive action to return AWP assets to a serviceable condition. These actions may include: cannibalization, local purchase, supply difficulty letters, follow-ups, and substitutions.

3.3.5 In-shop serviceable assets may be cannibalized to preclude or satisfy MICAP conditions. However, the AWP monitor must update the appropriate due-outs. These actions do not require documentation unless the items are removed from complete engine modules or engines.

3.3.6 Supply and maintenance must expend special efforts to obtain parts and perform authorized maintenance to preclude returning AWP assets to the depot. Base level managers have the authority to evacuate unserviceable end articles awaiting parts (AWP), NRTS 4 after aggressive actions have been taken to secure the SRUs/components/parts for repair. Prior to evacuation, disposition instructions need to be obtained from the end article item manager. The request for AWP end article evacuation will include the current condition of the end article. When furnished the disposition instructions, route the reparable item to the shop for preparation for turn-in. The shop will enter NRTS 4 in column D of the AFTO FORM 349 and in block 20 of the AFTO FORM 350. A maintenance shop inspector or a production scheduler will stamp or sign block 15 of the AFTO FORM 350. Forward the AFTO FORM 349 for maintenance data collection processing, and turn into base supply or return to bench stock all unused bits and pieces. When the AWP monitor determines that bits and pieces have no base consumption or demand forecasted, install in, package with, or attach them to the item for return to supply. The AWP monitor will cancel due-outs for bits and pieces not received.

3.4 PROCESSING MAINTENANCE TURNAROUND (TRN) TRANSACTIONS.

The basic maintenance concept and parts ordering policy for repair cycle assets is to remove and replace the defective component with a serviceable asset issued from supply. The unserviceable asset is then processed for bench check and repair through the PS function. However, under certain conditions it may be prudent to remove, bench check, repair and reinstall an item without a demand on supply. In these cases process a maintenance turnaround transaction (TRN).

3.4.1 Some of the reasons for processing a TRN are:

3.4.1.1 The component may be “married” or integrated to another component where replacement (in the case of an issue from supply) would necessitate replacement of the other component.

3.4.1.2 The defective component may require a minor repair while a new issue may need elaborate bench checking. Time constraints may dictate the repair.

3.4.1.3 The component may be trimmed and fitted to the end item in which case repair will usually be easier than replacement.

3.4.1.4 It may be easier to repair the defect on the equipment, in which case a demand on supply would be impossible.

3.4.2 Repair and return processing procedures are the same as normal reparable processing except for annotating “TRN” in the AFTO FORM 350, block 15 and routing it through the PS. If repaired, forward PART II of the AFTO FORM 350 to supply for processing of the TRN reparable generation demand data input. If repair cannot be accomplished, verify the “killed” bits and pieces for backorder or place a demand on supply for the items. Process and control the removed items as a normal DIFM item.

3.5 DOCUMENTING MAINTENANCE TURNAROUND (TRN) TRANSACTIONS.

Processing a TRN provides the same demand data as an issue of a serviceable asset from supply and maintenance repair and turn in of the assembly which failed. Only maintenance action taken codes A, F, G, K, L, or Z qualify for TRN transactions. Failure to process TRNs effects stock levels and results in incomplete reports on which AFLC bases buy, repair, and distribution decisions. The PS will act as the single point for processing AFTO FORM 350 TRN data to supply and will assume the following duties and/or responsibilities.

3.5.1 Ensure the supply TRN monitor assigned a PS ID number to the maintenance activity. The supply monitor must provide the name, duty location, phone number, and mailing address utilized in processing TRN data or for resolving any related problems.

3.5.2 Forward all AFTO FORMS 350, PART II, which require TRN processing to the supply TRN monitor by the most expedient method available. Ensure the AFTO FORMS 350 contain valid part number, NSN, maintenance action taken code, the SRD of the weapon system or equipment from which the item was removed and number of repair days.

3.5.3 Maintain a record of AFTO FORMS 350, PART II, forwarded to the supply TRN monitor. The AF FORM 2521, TURNAROUND TRANSACTION LOG, may be used for this purpose. If a locally devised form is used, it should contain at least the following specific entries.

3.5.3.1 Stock number and/or part number.

3.5.3.2 Total repair cycle days. Total repair cycle days.

3.5.3.3 Maintenance action taken code.

3.5.3.4 AFTO FORM 350 tag number.

3.5.4 Review copy 3 of the Daily Document Register to ensure correct processing of each TRN. After verifying the TRN processed correctly, annotate the log accordingly. If the TRN processed incorrectly or did not process in a reasonable amount of time, the PS will coordinate with the supply TRN monitor to determine why and take corrective action.

3.6 PROCESSING REPARABLES FOR UNITS SUPPORTED BY A MAIN OPERATING BASE.

Use the following procedures in conjunction with the procedures authorized in AFM 67-1, Volume II, Part two for units operating at locations where little or no repair capability exist, when deployed to a forward operating location (FOL) supported by a main operating base (MOB), or for enroute support activities to return items to the supporting activity. The PS at the MOB or support activity schedules the accomplishment of off-equipment maintenance.

3.6.1 When items cannot be repaired at the forward location, forward location personnel will attach an AFTO FORM 350 to each item forwarded to the support activity. Annotate the AFTO FORM 350 with action taken code D, bench check/repair transferred to another base. This identifies items the forward maintenance activity cannot code NRTS, or repair.

3.6.2 Upon receipt of a transferred item from base supply, the PS will schedule the item into the shop for repairs. If the transferred item is received without an AFTO FORM 350 attached, the production scheduler will initiate a new AFTO FORM 350.

3.6.3 The MAC FSS (Forward Supply System) uses the same procedures. In addition, the forward supply location (FSL) personnel will overstamp the front of the AFTO FORM 350 with "FSS" in red ink prior to transferring the item to the primary supply point for repair.

3.6.3.1 Supply will be responsible for delivery of unserviceable FSS items to the appropriate production scheduler/shop.

3.6.3.2 Upon receipt of completed reparable FSS engines at the primary supply point for maintenance or inspection, the engine manager will immediately notify the documentation section of the requirement to load an ID number for the engine.

3.7 USE OF MEMO DUE-OUTS.

The supply system provides a technique to maintain visibility of an asset processed through maintenance when the request for an assembly or subassembly results in a "kill". This visibility is accomplished by creating a memo due-out. To create the memo due-out, maintenance must verify the requirement and request reinput with a transaction exception (TEX) code 7.

3.8 SUPPLY POINTS.

The DCM/chief of maintenance, in coordination with the chief of supply, may place supply points within the maintenance complex. Supply point stocks may include any item of supply, except equipment items. Expendable items (ERRC XB3) must be approved by the mission support section in base supply to be placed on supply points. The control of the supply point is a supply responsibility. The DCM or equivalent must provide adequate facilities to accommodate the supply points.

3.8.1 The supply point concept allows prepositioning selected assets in designated maintenance shops which are normally managed by the shop chief. Generally this procedure is reserved for items requiring build-up or bench check prior to issue. Supply is responsible for transferring the assets to the shop and processing the necessary documentation. The shop chief will advise supply each time the item is removed from the supply point. Upon repair of the item removed from the end item by the shop, place it in the supply point and notify supply. Supply will process a paper work turn-in to clear the DIFM and update the repair cycle data. NRTS and condemnation actions require normal DIFM turn-in procedures.

3.8.2 The shop chief will assist supply in accomplishing the quarterly supply point reconciliation and the semi-annual inventory.

3.9 PROCESSING SUPPLY ASSETS REQUIRING FUNCTIONAL CHECK.

Maintenance shops must identify to the PS those items requiring functional check or calibration, prior to issue. The PS will prepare a consolidated list of these items and forward it to the supply inspection section. As a minimum, this list will identify the items by NSN, repair shop delivery destination code, and frequency of functional check. MAJCOMs will establish appropriate intervals for periodically reviewing and updating these listings. Criteria to be used in selecting items for inclusion in the functional check program include: the length of time required for a prior to use bench check, the failure history of the item, the need to "marry" components, and other considerations as determined by the MAJCOM or local managers. The PS and supply inspection section will coordinate on issue and delivery of these items. Supply may also request functional checks of items because of evidence of improper handling. The supply inspection section will initiate a "C" activity issue to the organization and shop code furnished by the PS. The PS will schedule the items to the applicable shop. These items will be under DIFM control procedures until returned to supply. Should these items require repair while in maintenance, the repairing shop will order the required bits and pieces. Additionally, if supply received the item from depot level repair and it bench checked bad, accomplish appropriate material deficiency reporting in accordance with TO 00-35D-54.

3.10 DUE-OUT CANCELLATIONS.

There will be times when a repair cycle asset is removed for bench check and repair and a replacement is back ordered with supply. If the shop repairs the item before receipt of the back ordered item, they will cancel the due-out using the appropriate action taken code and procedures outlined in AFR 67-23, Chapter 5. This due-out cancellation process, providing the appropriate action taken codes are used, provides the same results for demand data update with the SBSS as processing a TRN. Only action taken codes A, F, G, K, L, or Z update demand data. When notified of this transaction, the PS will suspense the AFTO FORM 350, PART II, until confirmed by review of the Daily Document Register (DO4).

3.11 PROCESSING ASSETS FOR BENCH CHECK.

When an asset is processed for bench check it will generally either be found serviceable and reinstalled, repaired and reinstalled without placing a demand on supply, scheduled for repair and a replacement ordered from supply, or be found NRTS and processed accordingly. The following procedures will be used for assets being processed for bench check:

3.11.1 If the asset is found serviceable, record the status in block 15 of the AFTO FORM 350, PART I, and the inspector's name or stamp in block 26. The AFTO FORM 350 remains with the asset until it is reinstalled.

3.11.2 If the asset is repaired and reinstalled without placing a demand on supply, paragraphs 3.4 and 3.5 apply.

3.11.3 If a replacement is ordered from supply and the asset is scheduled for repair, process the asset for repair using normal DIFM procedures. When maintenance returns a serviceable asset to supply, the shop prepares and attaches a DD FORM 1574 and an AFTO FORM 350 to the asset to indicate serviceable status. If the asset is being returned in a container, and is unclassified, a DD FORM 1574-1 is also prepared and attached to the outside of the container. Label classified assets in accordance with table 3-2 and AFR 205-1.

3.11.4 If the asset is not reparable this station, accomplish the following:

3.11.4.1 If NRTS code 1, the 350 tag will include reference to the authority for NRTS declaration.

3.11.4.2 If NRTS code 8, the work center technician will annotate the AFTO FORM 350, block 15, to identify the ALC and the name of the person (IM/SPM) authorizing the return (including phone number).

3.11.4.3 If an item is condemned, (NRTS code 9) the shop will prepare and attach a DD FORM 1577, unserviceable (condemned) materiel tag to the item to show condemned status. Reference the publication or directive which authorized the action on the DD FORM 1577. Also attach a DD FORM 1577-1, unserviceable (condemned) label to the outside of the container. Return the item to the PS with the AFTO FORM 350, PART I, attached.

3.11.4.4 For all NRTS codes, except NRTS code 9:

3.11.4.4.1 Complete the AFTO FORM 350 and record the applicable NRTS code in block 15.

3.11.4.4.2 Attach the AFTO FORM 350, PART I, and the DD FORM 1577-2 to the asset.

3.11.4.4.3 Prepare a DD FORM 1577-3, unserviceable label or DD FORM 1577-2, unserviceable tag, as ID for the outside of the container.

3.11.4.4.4 Package the asset in accordance with the control requirements specified in the TO.

3.11.4.4.5 Return the asset and all related data to the PS.

3.11.5 When declaring a complete assembly NRTS after making a separate demand on the supply system for a DIFM-controlled subassembly which was not available, check the authorized base stock level of the subassembly. If the base stock level is inadequate, it may be necessary to initiate an AF FORM 1996, Adjusted Stock Level Request, to provide data to base supply for establishing the required stock level for the subassembly. See AFR 67-23, Chapter 3, for preparation instructions. Maintenance managers should determine and correct the cause for inadequate levels.

3.12 MAINTENANCE PREPARATION FOR TURN-IN OF ASSETS TO SUPPLY.

Maintenance accomplishes the following actions prior to turning in assets to supply.

3.12.1 Place the asset in its container but do not seal the container. Reuse specially engineered containers and packing within unit capability. If the appropriate container is not available, the item will be accompanied by a properly prepared request for packaging service (AF FORM 451, Request for Packaging Service).

3.12.2 If TOs specify environmental control requirements, such as pressurization of a container, the shop will accomplish all actions to meet these requirements.

3.12.3 Forward all properly prepared required documentation, e.g., AFTO FORM 350, DD FORM 1577-2/-3, and the computer generated product showing life consumed for a time change/life limited serialized item (if for an assembly, this printout must include data for all embedded time change/life limited items) with the item as follows:

3.12.3.1 The AFTO FORM 350 and the computer generated printout of current life for time change/life limited items are attached to the DD FORM 1577-2, and physically attached to each item.

3.12.3.2 The use of multiple quantities on AFTO FORM 350 and DD FORM 1577-2 for time change/life limited items is not authorized due to (1) the requirement to write the consumed life for each time change/life limited serialized item on the DD FORM 1577-2; (2) to indicate the discrepancy for repair purposes for each item on the AFTO FORM 350; and (3) to attach the computer generated printout of the current life consumed with the AFTO FORM 350 to the DD FORM 1577-2.

3.12.3.3 You may use multiple quantities on DD FORMs 1577-2/-3 on the outside of shipping containers for shipments of multiple items. However, each item inside the container must be individually tagged.

3.12.3.4 For time change/life limited items not tracked in an automated system, the DD FORM 1577-2 for the item must be annotated with current status of life consumed. If for an assembly, the DD FORM 1577-2 must include data on all embedded time change/life limited items, and the DD Form is physically attached to the item. See the applicable aircraft -6, -06, or TO 00-20-5-1-X for time change/life limited items.

3.12.4 Take appropriate reclamation and demilitarization actions on condemned repair cycle assets. When destroying top secret or secret materiel for which DODISP5200.1-R/AR 205-1 requires a receipt, prepare a destruction certificate and forward it to the PS. Forward all serviceable items, scrap and residue from demilitarization or destroyed repair cycle assets to the PS.

TO 00-20-3

- 3.12.4.1 Serviceable bits and pieces removed from XB/XF/XD items should be maintained in the maintenance shops and when no longer required they should be turned in to supply.
- 3.12.4.2 Serviceable repair cycle type items, i.e., XF and XD, removed from the condemned end item will be turned in to supply.
- 3.12.4.3 Maintenance personnel involved with the removal of bits and pieces should be aware that some assets may contain precious metals which must be handled in accordance with AFR 400-14.
- 3.12.4.4 Parts removed from XD items should be identified and an annotation made on the back of the condemned tag.
- 3.12.4.5 Maintenance shops should establish a list of ERRC XD candidate items which meet the cost criteria (less than \$1000) as outlined in paragraph 1.8.a.
- 3.12.4.6 XD/XF items removed from condemned assets must be properly accounted for and base level usage data properly reported.
- 3.12.4.7 Maintenance shop chiefs must certify that the repair cost is over 75 percent of the cost of a new item in accordance with paragraph 1.8.
- 3.12.4.8 USAF-designated critical items are excluded from this process.
- 3.12.5 Clean and preserve repair cycle assets as required by technical orders.
- 3.12.6 Forward all repair cycle assets to a designated pick-up point for pick-up by supply or the PS/RCM function.
- 3.12.7 For reliability improvement warranty (RIW) items, record and verify the serial number of the assembly and action taken code 1 on the AFTO FORM 350, PART I. Supply requires both entries for proper processing.
- 3.12.8 All historical records concerning an asset must accompany the asset when it is turned in to supply. Check with plans, scheduling and documentation for the documents. Examples of assets which have historical documents are aircraft engines, time change/life limited items, and landing gears.

NOTE

When aircraft are deployed to a base without an automated tracking system, life limited assets may be shipped without a computer generated printout of current life. However, current life data must be entered on the DD FORM 1577-2 (if for an assembly, the DD FORM 1577-2 must include data on all embedded time change/life limited items) and the maintenance discrepancy written on the AFTO FORM 350. These forms are attached to each item to ensure the receiving/repair activity can determine time/life remaining in order to repair the item as necessary. When the gaining activity does not receive updated life consumed data, the activity will request data from the shipping activity via telecon/message. Always ensure the time change/life limited items are reported removed from the home base automated tracking system prior to shipment to another activity, and the receiving activity is provided with all necessary forms and data.

- 3.12.9 F100 engine users with Automated Ground Engine Test Systems (AGETS) will attach the component removal report to the DD FORM 1577-2 when turning in reparable components to supply.

3.13 ASSET TURN-IN TO SUPPLY.

The PS will perform the following actions for asset turn-in to supply:

- 3.13.1 Reconcile the AFTO FORM 350 with the DD FORM 1348-1 (copies 3 and 4). PART I of the AFTO FORM 350 will indicate the NSN in block 23, and the stock record account number (SRAN) in block 24. PART II of the AFTO FORM 350 will indicate the date removed and the AWP days, if applicable, in block 29.
- 3.13.2 For reliability improvement warranty (RIW) items, ensure the serial number of the item is on the AFTO FORM 350, PART I, block 12, and the action taken code 1 is shown in block 20 of the AFTO FORM 350, PART 1. Both entries are necessary for correct processing and routing by supply.
- 3.13.3 Verify the accuracy of the condition tag affixed to the repair cycle asset (see tables 3-1 and 3-2).

3.13.4 Accomplish appropriate reclamation and demilitarization actions on condemned repair cycle assets. Ensure completion of a destruction certificate when destroying top secret or secret materiel requiring a receipt by DODISP 5200.1-R/AFR 205-1.

3.13.5 Ensure the asset is cleaned, preserved, and properly packaged as directed by TOs.

3.13.6 Obtain the supply representative's signature on copy 4 of the DD FORM 1348-1, and file it in the completed DIFM file. Copy 3 of the DD FORM 1348-1 will accompany the repair cycle asset to supply for subsequent turn-in action.

3.13.7 For NRTS items, ensure the AFTO FORM 350, PART I Discrepancy, block 14, and/or block 15 contains complete descriptive information about the discrepancy and reason for NRTS action. Do not use phrases such as "failed to operate," or "internal failure".

3.13.8 When transferring items which require separate historical files, ensure the appropriate documentation (AFTO FORM 95) accompanies the item. Depending upon application, you will find instructions for the AFTO FORM 95 in TO 00-20-4, TO 00-20-5, TO 00-20-7, or TO 00-20-8.

Table 3-1. How to Use Condition Tags/Labels

RULE	A If the item is	B and the item is	C then prepare	D and assign condition code
1	Serviceable	New, used, repaired or reconditioned materiel which is serviceable and issuable to all customers without limitation or restrictions. Includes materiel with more than 6 months shelf life remaining.	DD FORM 1574/1574-1	A Issuable without Qualification
2	Serviceable	New, used, repaired or reconditioned materiel which is serviceable and issuable for its intended purpose but which is restricted from issue to specific units, activities or geographical areas by reason of its limited usefulness or short service-life expectancy. Includes materiel with 3 through 6 months shelf life remaining.	DD FORM 1574/1574-1	B Issuable with Qualification
3	Serviceable	New, used, repaired or reconditioned materiel which is serviceable and issuable to selected customers, but which must be issued before Condition A and B materiel to avoid loss as usable assets. Includes materiel with less than 3 months shelf life remaining.	DD FORM 1574/1574-1	C Priority Use
4	Serviceable	Serviceable materiel which requires test, alteration, modification, conversion or disassembly. This does not include items which must be inspected or tested immediately prior to issue, or Type II shelf life material with expired time.	DD FORM 1576/1576-1	D Test/Modification
5	Unserviceable	Materiel which involves only limited expense or effort to restore to serviceable condition and which is accomplished in the storage activity where the stock is located.	DD FORM 1577-2/1577-3	E Limited Restoration
6	Unserviceable	Economically reparable materiel which requires repair, overhaul or reconditioning. Includes reparable items which are radioactively contaminated.	DD FORM 1577-2/1577-3	F Reparable
7	Unserviceable	Materiel requiring additional parts or components to complete the end item prior to use.	DD FORM 1577-2/1577-3	G Incomplete
8	Unserviceable	Materiel which has been determined to be unserviceable and is uneconomical to repair, or condemnation has been directed by a time compliance technical order (TCTO). Includes Type I shelf life material with expired time.	DD FORM 1577/1577-1	H Condemned
9	Suspended in Supply Stock	Materiel in stock which has been suspended from issue pending condition classification analysis, where the true condition is not known. Includes Type II shelf life material with expired time.	DD FORM 1575/1575-1	J In stock

Table 3-1. How to Use Condition Tags/Labels - Continued

RULE	A If the item is	B and the item is	C then prepare	D and assign condition code
10	Suspended	Materiel returned from customers or users and awaiting condition classification. AFLC activities may use this code for disassembled materiel deficiency report (MDR) exhibits in accordance with criteria in volume III, part two, chapter 4 of AFM 67-1.	DD FORM 1575/1575-1	K Returned
11	Suspended	Materiel held pending litigation or negotiation with contractors, vendors or carriers.	DD FORM 1575/1575-1	L Litigation
12	Suspended	Materiel identified in inventory control record but which has been turned over to a maintenance facility or contractor for repair.	DD FORM 1575/1575-1	M In Work
13	Suspended	Ammunition stock suspended for issue except for emergency combat use.	DD FORM 1575/1575-1	N Ammunition Suitable for Emergency Combat Use Only
14	Unserviceable	Material determined to be unserviceable, uneconomically repairable as a result of physical inspection, tear down or engineering decision, but the item contains serviceable components or assemblies to be reclaimed.	DD FORM 1577/1577-1	P Reclamation
15	Suspended	Quality/material deficient exhibits returned by customers/users as directed by the item manager/system manager due to technical deficiencies reported by a Quality Deficiency Report. Exhibit requires technical or engineering analysis to determine cause of failure. This code is for intra-air force use only.	DD FORM 1575/1575-1	Q Returned
16	Suspended	Materiel reclaimed by inventory control points/item managers from activities that do not have the capability to determine material condition e.g., skills, manpower or test equipment. Actual condition, serviceable or unserviceable, is determined at the repair facility and reported to the inventory control point/item manager before issue or repair. This code is for intra-air force use only.	DD FORM 1575/1575-1	R Reclaimed

Table 3-2. Required Entries For Condition Tags/Labels

	DD FORM 1574/ 1574-1	DD FORM 1575/ 1575-1	DD FORM 1576/ 1576-1	DD FORM 1577/ 1577-1	DD FORM 1577-2/ 1577-3
NSN, Part No., Item Description	X	X	X	X	X
Serial No./Lot No. (Note 1)	X	X	X	X	X
Quantity	X	X	X	X	X
Unit of Issue	X	X	X	X	X
Condition Code	A, B or C	J, K, L, M, N, Q or R	D	H or P	E, F or G
Inspection Activity	X	X	X	X	X
Inspector's Name or Stamp and Date	X	X	X	X	X
Contractor Purchase Order No. (Note 2)	X	X	X		X
Reason for Repairable Condition					X
Authority/Date			X		
Next Inspection Due/Overage Date	X (Note 13)	X			
Removed from					X
Reason or Authority		X		X	
Remarks	X (Notes 3, 4, 5, 6, 7, 8, 9, 10)	(Note 8)	(Note 8)	(Note 8 & 12)	(Note 8 & 11)

Note 1. Required only for those items controlled and reported by serial number or lot number.

Note 2. Required only when item is still under warranty and contract number is available.

Note 3. DD FORM 1574/1574-1 will be annotated in the remarks block with the phrase, "TCTO (number) complied with ", "All TCTOs as of (date) complied with", "TCTO (number) not complied with" or left blank as applicable, when items are returned from organizational/intermediate or depot level maintenance to supply. These annotations are not required whenever the item being returned has undergone TOC action involving modification and resulted in a change in NSN or part number. For COMSEC assets use the statements "MOD (number) complied with" or "MOD (number) not complied with".

Note 4. NEW PRODUCTION ASSETS (Never overhauled or repaired) When a time change item is a "NEW" serviceable asset (never used, overhauled, or repaired), the "REMARKS" block of DD FORM 1574/1574-1 will be annotated as follows:

* "TSN = 0.0" (time since new).

** "TSO = 0.0" (time since overhauled).

Equipment description that the item goes on.

Note 5. REPAIRED ASSETS (Check and test or minor repair, not overhauled)

Accessories or engine components applicable to engines which have mechanical tracking system (computer) such as F100-PW-100, TF34 and TF39 will have the total operating time (time since new) and the time since overhaul reflected in remarks block of the DD FORM 1574.

* "TSN = ____" (time since new). TSO and TSN values will be equal

** "TSO = ____" (time since overhauled). until first O/H has been accomplished

Equipment description that the item goes on.

Table 3-2. Required Entries For Condition Tags/Labels - Continued

	DD FORM 1574/ 1574-1	DD FORM 1575/ 1575-1	DD FORM 1576/ 1576-1	DD FORM 1577/ 1577-1	DD FORM 1577-2/ 1577-3
<p>Note 6. OVERHAULED ASSETS (Major overhaul) When a time change item is made serviceable by "OVERHAUL" the "REMARKS" block of DD FORM 1574/1574-1 will be annotated as follows: * "TSN = ____" (time since new). ** "TSO = ____" (time since overhauled). Equipment description that the item goes on.</p> <p>Note 7. Contractors that do not have access to values will obtain the data by contacting the appropriate engine tracking section that has management responsibility for the asset. Legends: *TSN represents the time accumulated since the asset entered the inventory as new item. Total operating time (TOT), engine operating time (EOT), time since new (TSN), accrued operating time, and total equivalent cycles (TEC) are synonymous. The preferred term is "TSN" respective to the tracking method used for the item (either hours or cycles). **TSO represents the time accrued since last overhaul.</p> <p>Note 8. For classified components a stamp will be used that states "This item is classified ____ and will be handled in accordance with 205-1". For classified components under COMSEC Control (i.e., those using the TSEC nomenclature system) a stamp will be used that states "This item is classified ____ and will be handled in accordance with AFKAG-1 ()". Bold black lettering will be used if no stamp is available. Only the DD FORM 15XX attached to the item will be completed and stamped. The DD FORM 15XX attached to the outside of the item's container will be completed except for the classified stamp. See DOD 5220.22-R/AFR 205-4 and AFR 75-1 for additional guidance on packaging classified components for shipment.</p> <p>Note 9. Enter the inspection due date/overage date. If no inspection is required, enter N/A.</p> <p>Note 10. If the DD FORM 1574 is for an assembly, the form must be annotated with the applicable time since new (TSN) and/or time since overhauled (TSO) data for every embedded time change/life limited item. The data is placed in the "REMARKS" block or if not enough space on the back of the form. If a computerized product is available that indicates TSN/TSO data for the embedded items in the assembly, then the DD FORM 1574 will be annotated with "see attached data" in the "REMARKS" block of the form and the computer product then attached to the DD FORM 1574 that is attached to the assembly.</p> <p>Note 11. For time change/life limited components see TO 00-20-2-10, paragraph 1-26, or TO 00-20-3, paragraph 3-12.</p> <p>Note 12. When an organization condemns an item whose extended value exceeds \$1,000.00 the organization turning in the item to a DRMO must identify on the DOD Form 1577/1577-1 the reason or authority for condemning the material (e.g., repairs exceeds 75% of unit replacement cost; shelf life expired; condemned by TCTO). Reason/authority for condition coding is a mandatory entry for all condemned items, and shall not be omitted for any reason.</p> <p>Note 13. Munitions units utilizing the Combat Ammunition Systems do not require a "Next Inspection Due/Overage Date."</p>					

CHAPTER 4

INSPECTION OF REPAIR CYCLE ASSETS

4.1 AUTHORIZED INSPECTORS AND THEIR RESPONSIBILITIES.

Maintenance and supply functions will designate certain representatives to perform duties as inspectors as part of the Air Force quality assurance program. General responsibilities of maintenance and supply inspectors are as follows:

4.1.1 A maintenance inspector is a person authorized by the deputy commander for maintenance/chief of maintenance of an Air Force organization or activity to perform the following inspection functions (the term maintenance inspector may include quality assurance inspectors, production inspectors and designated maintenance supervisors):

4.1.1.1 Ensure quality of production with respect to repair, overhaul, modification, local manufacture, or restoration to a serviceable condition of all materiel and equipment at USAF activities according to standards prescribed by higher authority.

4.1.1.2 Determine the final condition of property. This includes items repaired, reclaimed, manufactured by the maintenance activity, or removed from service. Additionally, the inspector directs condemnation of property when necessary or when directed by higher authority and, when requested, determines the final condition of property received or stored by a supply activity. Table 3-1 lists authorized condition tags and describes their use. Table 3-2 describes which blocks on condition tags/labels require entries.

4.1.1.3 Ensure proper computation and entry of reinspection dates prescribed by TOs on applicable tags or labels, or on the markings used in lieu of such tags and labels.

4.1.1.4 Maintain or reestablish the identification of materiel restored to a serviceable condition, and establish the identification of articles locally manufactured, as well as those reclaimed or removed from major assemblies or complete units by a maintenance activity.

4.1.2 A supply inspector is a person authorized by the supply officer of an Air Force organization or activity to perform the following inspection functions:

4.1.2.1 Establish and maintain the final identification and classification of all property received, stored, issued, or shipped.

4.1.2.2 Identify known or suspected damage, deterioration or corrosion during use, storage, or shipment.

4.1.2.3 Ensure proper computation and entry of reinspection dates prescribed by TOs on the applicable tags or labels or on the markings used in lieu of such tags and labels to identify property received, stored, issued, and/or shipped by a supply activity.

4.1.2.4 Accept or reject property received on local purchase orders or contracts requiring inspection and/or acceptance at destination.

4.1.2.5 Determine status of property received, stored, issued, and shipped by a supply activity, and direct condemnation of property when prescribed by directives of higher authority.

4.1.2.6 Establish and maintain inspection controls on materiel within the technical order compliance category to ensure inspection dates permit the availability of serviceable stock.

4.1.2.7 Verify and/or reidentify property using decal, stickers, or labels to ensure proper identification of assets received or in stock.

4.2 BASE INSPECTION STAMPS.

Inspection stamps may be used to identify the responsible inspector determining the condition of materiel or equipment. If stamps are not used the inspector will sign the appropriate form. A stamp or signature indicates an authorized inspector reviewed and inspected the item to verify the indicated condition/identity.

4.2.1 The deputy commander for maintenance/chief of maintenance is responsible for the issuance and control of maintenance inspection stamps. Inspection stamps used at operating locations will have a standard configuration of an equilateral triangle as illustrated in figure 4-1. The recommended size of the triangle is one having 1/2 inch sides. The stamp

TO 00-20-3

serial number will be inside the triangle. Emboss the outside of the triangle with the letter “M” to indicate maintenance activities, the base supply or munitions stock record account number, and the base, wing, or squadron identification. The recommended size of letters and numerals is 1/8 inch in height. Use of larger or smaller stamps is optional provided the configuration of an equilateral triangle is maintained.

4.2.2 The chief of supply may issue supply inspectors an inspection stamp in accordance with AFM 67-1, Volume I, Part One, Chapter 4.

4.2.3 Appoint munitions inspectors and issue them a munitions inspection stamp in accordance with TO 11A-1-10.

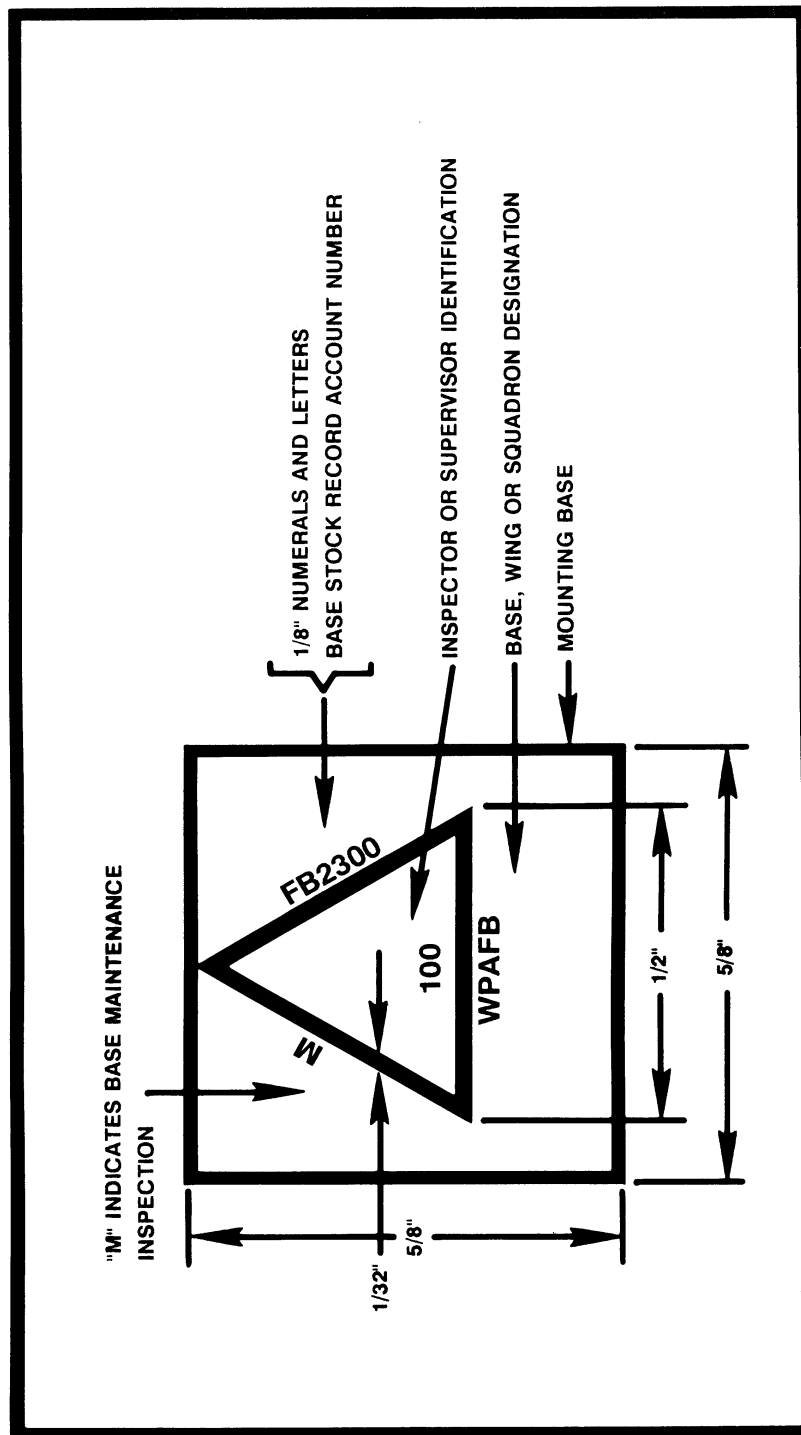


Figure 4-1. Sample Enlarged Illustration of Base Level Inspection Stamp

CHAPTER 5

MAINTENANCE PROCESSING OF WARRANTY ITEMS

5.1 SPECIAL HANDLING OF WARRANTY ITEMS.

Warranties cover certain repair cycle items procured by the Air Force. A sticker, decal, stencil or tag, which specifies conditions of the warranty, identify these items. The warranty will normally be specified in terms of operating time or calendar period. Items under warranty require special handling and processing in accordance with the following instructions:

5.1.1 For unserviceable items identified by a warranty sticker, decal, stencil, or tag, the maintenance technician will make the following boldfaced entry on the AFTO FORM 350, block 15: WARRANTY ITEM.

5.1.2 Process warranty items that fail within the warranty period in accordance with procedures prescribed in TO 00-35D-54. To preclude voiding of the warranty, do not attempt repair, unless specifically authorized in the applicable equipment technical order.

5.1.3 Process items that fail after expiration of the warranty period under standard reparable processing procedures. If the warranty expired, the operating location or depot activity that accomplishes the repair on such items will remove the warranty sticker, decal, stencil, or tag to preclude assumptions by the next using activity that the warranty is still in effect.

5.2 ENGINE WARRANTIES.

Basic aircraft engines (AFR 400-1) overhauled by AFLC depot facilities have a warranty against defects in AFLC workmanship. This warranty covers repairs required after a major overhaul, which returns the item since overhaul of the basic engine, gearbox, or module to zero, including engines removed for Joint Oil Analysis Program (JOAP) requirements. This program will cover the first 100 hours of post overhaul operation or 1 year from the date of receipt by the using activity, whichever occurs first. See figure 5-1 for a flow chart of the warranty decision process. MAJCOMs which desire to exercise this warranty will contact the responsible engine division (OC-ALC or SA-ALC), Engineering and Reliability Branch (MMPR), for corrective action. Submit formal reports in accordance with TO 00-35D-54:

5.2.1 The warranty program provisions do not cover the following engines:

5.2.1.1 Auxiliary power units and small gas turbine engines.

5.2.1.2 Items overhauled for security assistance customers.

5.2.1.3 Engines covered by interservice agreements.

5.2.1.4 Engines overhauled under commercial contracts, except as warranted under standard commercial warranty, or as provided by the requirements of DAR (ASPR 1-324) where such requirements can be met cost effectively.

5.2.1.5 Engines requiring less than 100 man-hours to return to a serviceable status.

5.2.1.6 Maintenance performed without coordinating with the engine manager (MMPR), including removal or substitution of components or accessories. Swapping or exchanging components or accessories hinders problem diagnosis and inflates repair costs.

5.2.2 Also excluded are engines damaged due to the following:

5.2.2.1 Foreign object damage (FOD).

5.2.2.2 Transportation.

5.2.2.3 Aircraft structural failure.

5.2.2.4 Combat damage.

5.2.2.5 Aircraft accidents for which the engine is not the basic cause, but receives secondary damage.

5.2.2.6 Oil starvation or engine damage caused by other than basic component malfunctions.

TO 00-20-3

5.2.2.7 Fuel contamination or engine damage caused by use of contaminated fuel.

5.2.2.8 Operational damage - engine damage caused by any operation beyond perimeters prescribed in operational manuals.

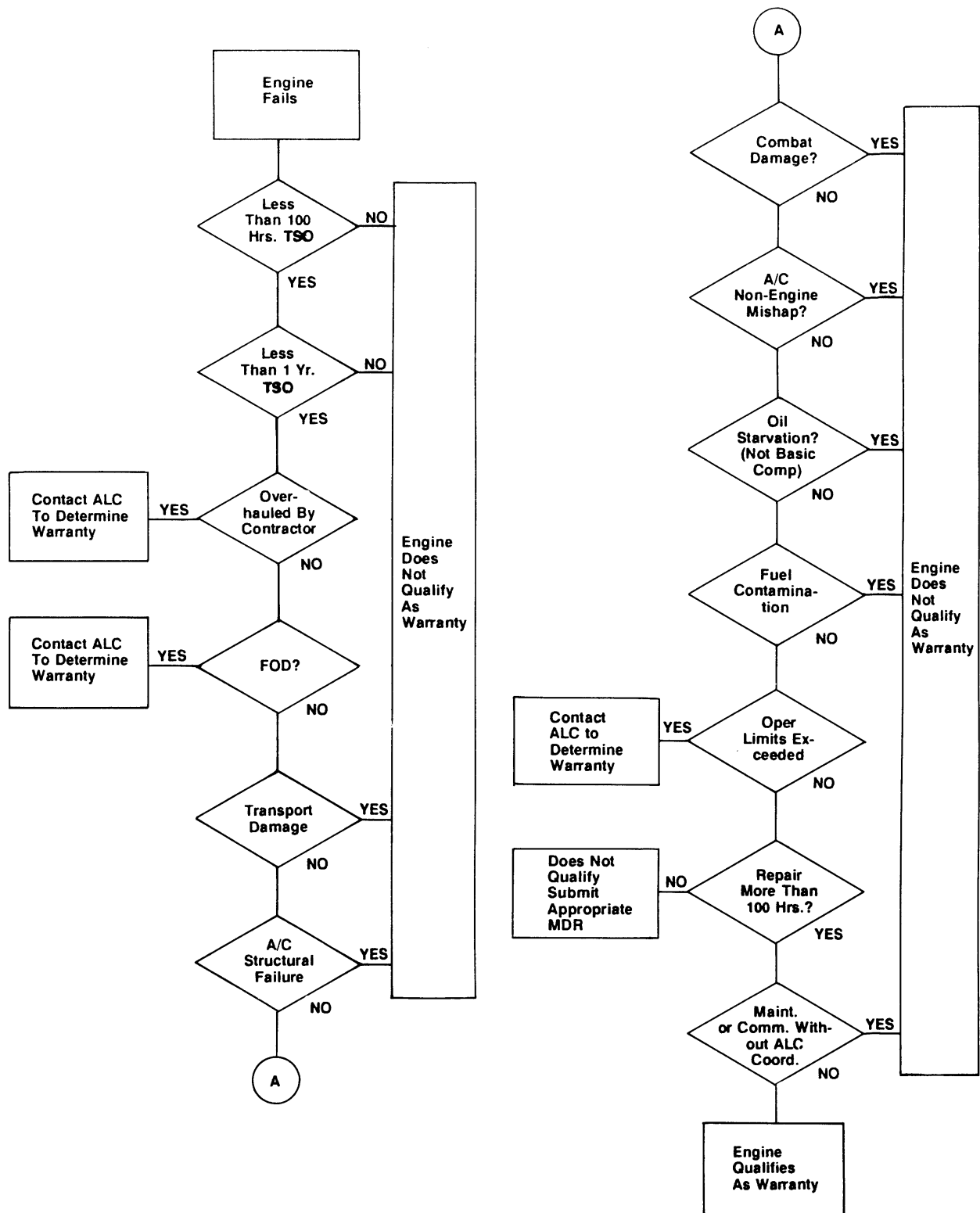


Figure 5-1. Flowchart of Warranty Decision Process

CHAPTER 6

BASE REPAIR CAPABILITY, SELF SUFFICIENCY AND AUTHORIZED REPAIR CAPABILITY

6.1 PURPOSE.

This section outlines Air Force policies for the repair of items, provides base repair guidelines, and prescribes procedures for computing base repair capability and base self sufficiency. This section also provides general guidelines for requesting increases to base level repair capability.

6.2 GENERAL.

The extent of base repair is a joint decision of the using commands and AFLC. MAJCOMs, in conjunction with AFLC, will actively pursue increases to base repair capability if technical skills are available and increases in equipment authorizations are economically feasible. To preclude possible accidents, materiel damage, or waste, workcenter supervisors must continue to ensure their personnel do not attempt repairs beyond available skill, equipment, and facility capabilities. However, to prevent invalid returns to the depot, take every precaution to ensure the item is truly NRTS and in need of repair with the discrepancy and base identified on the AFTO FORM 350.

6.2.1 When an item requires repairs specifically prohibited for base level accomplishment by the technical manuals, use NRTS code 1. Do not use NRTS 1 if an item does not have a repair restriction. Also, never NRTS 1 those items assigned an SMR code containing a repair level code of D or DM (limited field repair/depot overhaul) unless the limit of authorized repair has been reached and the item requires further maintenance prohibited by a TO

6.2.2 NRTS codes 4, 5, and 8 require approval from an off-base activity; i.e., the IM for code 4, IM or MAJCOM for code 5, and SPM/IM for code 8.

6.2.3 For all other causes, use whichever NRTS action taken codes, i.e., 2, 3, 6, or 7, best describes why you could not accomplish repair.

6.3 MEASURING BASE REPAIR CAPABILITY AND BASE SELF SUFFICIENCY.

The MDC system collects data which is used to compute base repair capability and base self sufficiency. They are computed as follows:

6.3.1 Repair Capability. Divide the total number of units repaired (the sum of action taken codes A, F, G, K, L, and Z) by the total number of units repaired plus the total number of units not repaired this station (NRTS) codes 1 - 9, times 100. Also include items repaired through base level maintenance contracts. While repair capability includes factors which the operating location may not be able to influence, local maintenance managers should use the results to track the effectiveness of total repair capability. In addition, MAJCOM managers should use the information in evaluating programs to increase repair capability across an entire weapon system.

6.3.2 Self Sufficiency. Divide the total number of units repaired (the sum of action taken codes A, F, G, K, L, and Z) by the total number of units repaired plus the number of units reported under NRTS codes 2, 3, 5, and 6 times 100. Items repaired through base level maintenance contracts should also be included. This provides a measure to determine how well units are repairing those items they have the authority to repair and some influence over.

6.4 BASE REPAIR GUIDELINES.

Managers should use the following NRTS guidelines to help improve maintenance efficiency and effectiveness, and increase base repair capability and self sufficiency.

6.4.1 NRTS code 1, repair not authorized:

6.4.1.1 Use NRTS code 1 only for items having repair restrictions in the equipment TO.

6.4.1.2 Ensure the possibility of requesting base level repair authorization is pursued where feasible.

TO 00-20-3

6.4.1.3 Explore the possibility of other local units having repair authorization.

6.4.2 NRTS code 2, lack of equipment, tools or facilities:

6.4.2.1 Do not repetitively NRTS the same items without exploring tools or equipment acquisition.

6.4.2.2 Give the equipment causing NRTS conditions the highest priority for test, inspection, calibration or repair.

6.4.2.3 Explore the use of alternate organizational equipment or facilities, or lateral equipment resources prior to taking NRTS action.

6.4.3 NRTS code 3, lack of skills:

6.4.3.1 Investigate the availability of skills in other work centers.

6.4.3.2 Explore local training capabilities.

6.4.3.3 Notify higher headquarters of skill problems and schedule and/or request FTD training.

6.4.3.4 Request TO 00-25-107 assistance, if appropriate.

6.4.4 NRTS code 4, lack of parts:

6.4.4.1 Document unacceptable delivery dates and follow up. Use NRTS code 4 only with approval of the IM.

6.4.4.2 Pursue effective use of local purchase options.

6.4.4.3 Explore lateral support.

6.4.4.4 Submit AF FORM 1996 to obtain adjusted stock levels if appropriate.

6.4.5 NRTS code 5, shop backlog:

6.4.5.1 Distribute manpower among shifts according to workload.

6.4.5.2 Obtain assistance from within the maintenance complex or command prior to NRTS actions.

6.4.5.3 Attempt to transfer repair to another lateral organization.

6.4.5.4 Once it is determined that assistance is not available laterally or within the command, try to defer repair action to a later date. Only use NRTS code 5 after Major Command or IM disapproval of a formal request to defer maintenance.

6.4.5.5 Identify high man-hour consumer components through maintenance documentation to item managers to initiate reliability improvement modifications.

6.4.6 NRTS code 6, lack of technical data:

6.4.6.1 Ensure valid TO requisitions and aggressive follow up actions are taken.

6.4.6.2 Contact higher headquarters and/or the appropriate equipment technician in AFLC as an alternate source prior to NRTS action.

6.4.6.3 Develop and obtain approval of local checklists for use as outlined in AFR 66-1 and TO 00-5-2 in the event that Air Force Technical Orders do not exist.

6.4.7 NRTS code 7, lack of authority to obtain resources: Ensure exploration of ways to gain authority to obtain required resources.

6.4.8 NRTS code 8, directed by IM/SPM:

6.4.8.1 Ensure that the IM/SPM actually directed return of assets.

6.4.8.2 Do not use NRTS code 8 to mask conditions more accurately depicted by NRTS codes 2-7.

6.4.9 NRTS code 9, condemned:

6.4.9.1 If XD, ensure unit cost is less than \$1000 and condemnation is supported by an economic repair determination (prior to NRTS code change the Item Manager and/or Equipment Specialist may waive on a case by case basis).

6.4.9.2 If XF, ensure condemnation is supported by an economic repair determination.

6.4.9.3 Do not use NRTS code 9 if NRTS codes 2-7 more accurately depict the item condition.

6.4.9.4 Ensure every effort has been made to repair the item.

6.5 REQUEST FOR INCREASING BASE REPAIR AUTHORIZATION.

When maintenance managers determine there should be authorized base level repair for an item, they may take one of the following actions:

6.5.1 Submit an AFTO FORM 135, Repair Change Request, in accordance with TO 00-25-195 for authority to repair items not currently authorized by SMR code for repair at base level. Major Commands review these requests in light of command-wide base repair capabilities. Major Commands will submit approved requests to the appropriate ALC for further action. The ALC will make the final determination to approve or disapprove base repair of an item. The ALC evaluation, although not limited to the following, should address tools, test equipment, TO requirements, and spare parts provisioning requirements to provide the capability to perform the new repair suggested. The economics of implementing new repair concepts is important, however; mobility or operational requirements may override economics. Reviewers of AFTO FORMs 135 will provide clear and concise reasons for disapproval action. Direct contact with the submitting organization or Major Command is encouraged to facilitate evaluations of repair change requests.

6.5.2 Submit an AFTO FORM 22, TECHNICAL ORDER IMPROVEMENT REPORT, in accordance with TO 00-5-1 to request review of the repair restrictions in equipment TOs. The AFTO FORM 22 would only be used in instances where there is no SMR code assigned or the SMR code already authorizes repair. Table 6-1 provides additional guidance on the proper form to submit to request increases to base repair authorization.

6.5.3 In unique situations, individual units may request waivers to repair restrictions in equipment TOs if a local repair capability exists. Such requests will be validated by unit quality assurance and will be submitted on an AFTO FORM 135 (IAW TO 00-25-195). As a minimum, the letter will include information explaining the units repair capability, i.e., availability of tools, parts, test equipment and skill level. If the Major Command concurs with the request, it will be submitted by the Major Command to the appropriate SPM for final determination. SPMs will ensure that in cases where a waiver is granted, that required parts can be ordered by, and are releasable to, the unit making the repair.

6.5.4 Units will not take action to obtain additional manpower, facilities, test equipment, support equipment or special tools in order to develop local capability to perform restricted repairs without Major Command approval.

Table 6-1. How to Process Requests to Increase Base Level Repair Authority

IF THE UNIT WANTS TO	WHEN THE SMR CODE	AND THE EQUIPMENT TO	THEN SUBMIT
INCREASE REPAIR AUTHORITY	RESTRICTS REPAIR	RESTRICTS REPAIR	AFTO FORM 135
		DOES NOT RESTRICT REPAIR	
	DOES NOT RESTRICT REPAIR	RESTRICTS REPAIR	AFTO FORM 22
	IS NOT PUBLISHED		
IF AN INDIVIDUAL UNIT WANTS TO REQUEST A WAIVER TO INCREASE REPAIR AUTHORITY	RESTRICTS REPAIR	RESTRICTS REPAIR	AFTO FORM 135

Table 6-2. Acronyms

ACRT	AFLC Critical
AGE	Aerospace Ground Equipment
ATE	Automatic Test Equipment
AWF	Awaiting Testing
AWI	Awaiting Installation
AWM	Awaiting Maintenance
AWN	Automated Weather Network
AWP	Awaiting Parts
AXC	Aircraft Cross Country
BFN	Base Funded
BLIS	Base Level Inquiry System
BMGT	Base Management
CAMS	Core Automated Maintenance System
CDB	Central Data Bank
CEH	Civil Engineer Holding
CEM	Communications Electronics Meteorology
CEMS	Comprehensive Engine Management System
CMD	CEM Mobile Detachment
CTE	Contract Equipment
CTR	Contract Maintenance
D04	Daily Document Register
DCM	Deputy Commander for Maintenance
DIFM	Due in from Maintenance
DOC	Due out Cancellation
DWP	Repair cycle item which is a component of another repair cycle item that is in AWP status.
EACC	Electronic asset Control Center
EDD	Estimated Delivery Date
EIM	Engine Inventory Manager
ERRC	Expendability, Recoverability, Repairability Code
FAD	Force Activity Designator
FEM	Forecasted Engine Maintenance
FOL	Forward Operation Location
FSC	Forward Supply Class
FSP	Intransit from Forward Supply Point
FSS	Federal Supply System
FTL	Flight Line
FWP	Previous AWP Item ready for Scheduling and Repair
IAW	In Accordance With
ICBM	Inter Continental Ballistic Missile
IM	Item Manager
INO	Intransit Issue (off base only)
INR	Intransit Return (off base only)
INW	In Shop
ISU	Issue

Table 6-2. Acronyms - Continued

MMICS	Maintenance Management Information and Control System
JCN	Job Control Number
JETD	Joint Electronic Type Designator
LRU	Line Replacement Unit
MCL	Materiel Control List
MDC	Maintenance Data Collection
MICAP	Mission Capability
MOL	Main Operating Location
MPC	Maintenance Priority Code
MRL	Maintenance Repair Level
MSK	Mission Support Kit
MSL	Maintenance Supply Liaison
MTM	Maintenance to Maintenance
MWI	ICBM Maintenance awaiting Installation
NMCS	Not Mission Capable Supply
NMC	Not Mission Capable
NRTS	Not Repairable this Station
NSN	National Stock Number
OAM	Retained on System
P&S	Plans and Scheduling
PC	Production Control
PMC	Partial Mission Capable
PN	Part Number
PS	Production Scheduler
QEC	Quick Engine Change
RAC	Reparable Asset Center
RACC	Reparable Asset Control Center
RCM	Maintenance Repair Cycle Monitor
RCRT	Requirement Critical
RCSS	Repair Cycle Support Section
RFS	Warehouse Refusal
RIW	Reliability Improvement Warranty
RPC	Reparable Processing Center
RPR	Repair and Return
RTOK	Retested O.K.
SBSS	Standard Base Supply System
SE	Support Equipment
SM	System Manager
SMR	Source, Maintenance, and Recoverability Code
SPM	System Program Manager
SRAN	Stock Record Account Number
SRD	Standard Reporting Designators
TCG	Time Change
TCTO	Time Compliance Technical Order
TEX	Transaction Exception Code

Table 6-2. Acronyms - Continued

TIN	Turn-In
TMDE	Test, Measurement, and Diagnostic Equipment
TMS	Type, Model, and Series
TNB	Tail/Registration Number Bins
TO	Technical Order
TOC	TCTO Required for End Item
TRN	Maintenance Turnaround
TWP	Bits and Pieces required for Repair Action in transit
UJC	Urgency Justification Code
UMR	Unsatisfactory Materiel Report
UND	Urgency of need Designator
WRM	War Reverse Materiel
WRSK	War Readiness Spares Kit
WUC	Work Unit Code